University of Illinois at Urbana-Champaign

# Department of Electrical and Computer Engineering

155 Everitt Laboratory 1406 West Green Street Urbana, IL 61801-2991 217 333-7427 fax

March 8, 2006

Mr. Thomas Kennedy Director, Policy Program Energy Division Illinois Commerce Commission 527 East Capitol Street Springfield, IL 62701

Dear Mr. Kennedy:

This letter contains my responses to the comments received from Ameren Electric, ComEd, Midwest Generation, Peabody Energy, and PJM on the draft report "Evaluation of the Potential Impact of Transmission Constraints on the Operation of a Competitive Market in Illinois", dated April 2005. In particular, this letter contains my responses to the comments directed towards the portion of the work done by UIUC. Also, it should be noted that my comments were created in conjunction with the response to comments letter written by Argonne National Laboratory.

### General Issues

I would agree with Argonne that the two most significant issues and common observations made by the reviewers were 1) the report does not reflect the current operating practices for the PJM and MISO markets, and 2) the data and information used in the report has been superseded. I also agree with the essence of the Argonne response – the study was begun before the operation of the PJM and MISO markets in Illinois and used data and assumptions that were reasonable during the study time frame (2002-2003). I would also like to concur with Argonne that while this study certainly has limitations (as any study will), I believe the study has provided useful insight into the capacity and constraints of the Illinois transmission system.

### Response to Specific Comments

### Ameren

I agree that the upgrade of the Holland-Mason-Tazewell line greatly decreases the congestion in the Peoria area. Since this line has been upgraded, and the upgraded line case was studied, the earlier results could be omitted from the report. I also agree that the results could have been different if the study footprint had been enlarged, for example to include more of PJM. With respect to the lack of modeling operating guides for contingencies, it should be noted that we specifically asked for the appropriate utility contingency sets and any special protection schemes (operating guides). While Ameren did provide us with a contingency set, they did not provide us with any special protection schemes.

# University of Illinois at Urbana-Champaign

## Department of Electrical and Computer Engineering

155 Everitt Laboratory 1406 West Green Street Urbana, IL 61801-2991 217 333-7427 fax

#### ComEd

I agree with ComEd that due to delays in the study process the transmission system model became increasingly dated. The transmission system limits enforced in the study were those provided by ComEd. The study used the contingency set provided by ComEd. It should be noted that this contingency set often included post-contingent load shifts, and sometimes the post-contingent closing of bus tie breakers (e.g., contingency 138-L8805\_R\_N). Phase shifters were moved pre-contingent to remove post-contingent violations.

### 3. Midwest Generation

The transmission model and contingency sets used in the study were those provided by the Illinois utilities. The security constrained optimal power flow used for dispatching the generation did include the phase shifters as controls. As mentioned above I agree that the transmission model became dated and that an increased study footprint could have changed the results. However, an increased study footprint would not have significantly changed the potential for market power caused by localized transmission system congestion.

### 4. Peabody Energy

I certainly agree that changes in the assumed fuel prices could change the resulting generation dispatch, transmission system flows, and patterns of transmission system congestion.

#### P.IM

I believe all the PJM comments have already been addressed either above or in the response provided by Argonne.

In closing I would like to state that with respect to the work performed at UIUC, I believe that the approach was technically sound and that the results accurately represent the response of the transmission system as modeled. As with any study the final results depend upon the accuracy of the underlying models and the study methodology. I would like to thank the utilities for their assistance with this project both in helping to supply the initial models, and for their insightful comments on how the models and methodology could be improved.

Sincerely

Thomas J. Overbye

Fox Family Professor

A Jonele

Department of Electrical and Computer Engineering

University of Illinois at Urbana-Champaign